

REMARKS

Claims 1 to 41 have been cancelled. New claims 42 to 76 have been added.

In response to the Examiner's request, the abstract has been amended in order to contain at least fifty (50) words and to describe the invention such that a reader can decide whether he/she needs to consult the full patent text.

In the Office Action of December 29, 2006, the Examiner rejects claims 1, 2, 10 to 14, 28, 29, 32, 33, 36 and 37 under 35 U.S.C. §102(b) as defining an invention that is anticipated by U.S. Patent 5,885,500 issued on March 23, 1999 (hereinafter referred to as "Tawney"). The Examiner also rejects claims 3 to 9, 15 to 27, 30, 31, 34, 35 and 38 to 41 under 35 U.S.C. §103(a) as defining an invention that would have been obvious to a person skilled in the art in view of Tawney. Claims 1 to 41 have been cancelled, rendering moot the Examiner's rejections.

Tawney

Tawney discloses a dual density foam upper made of a foam core 22 and a foam bootie 24 mounted inside the foam core (see Figure 3). The foam core 22 is made of ethylene vinyl acetate (EVA), polyolefin foam. Other foams include DuPont EVA 6301 (75% vinyl acetate) and CIL EVA (18% vinyl acetate) (column 3, lines 60 to 66). The foam bootie 24 has an inner liner 26 and a foam overlay 32 partially covering the inner liner 26 (see Figure 2). The inner liner 26 is made of a synthetic woven material having a soft inner surface for contact with the foot and a urethane adhesive applied to its exterior surface to promote the bond between the exterior surface of the liner 26 and the foam core 22 or foam overlay 32 (column 4, lines 16 to 21).

In order to make the upper, the foam core 22 and foam bootie 24 are placed on a mold core 36 of an outer mold 38 in preparation of the molding process (column 4, lines 42 to 44). Once the mold 38 is closed, heat (between 250°F and 350°F) and pressure (between 50 psi and 150 psi) are applied to the mold in order to activate the adhesive primer and mold the foam to the desired form (column 4, lines 53 to 66).

Patentability of claims 42 to 50

The Applicant brings the Examiner's attention to the following highlighted features of new independent claim 42 that are neither disclosed nor suggested by Tawney:

42. A lasted footwear for enclosing a human foot having a heel, an ankle, and medial and lateral sides, said lasted footwear comprising an outer shell for receiving the foot, said outer shell being made of a multi-layer composite sheet that is thermoformed for defining a foot-receiving cavity having a three-dimensional geometry that conforms to the foot, wherein said multi-layer composite sheet has a first layer of thermoformable foam having a core and first and second opposite surfaces **and a second layer of fibers¹, and wherein one of said first and second opposite surfaces of said layer of thermoformable foam has a skin formed by exposing said one of said first and second opposite surfaces to temperatures between 200°F and 300°F².**

To anticipate claim 42, Tawney must disclose every feature of the claimed invention, either explicitly or inherently.³ Furthermore, inherency may not be established by probabilities or possibilities.⁴ Moreover, for the Examiner to establish a *prima facie* case of obviousness, three criteria must be considered: (1) there must be some suggestion or motivation, either in Tawney or in the knowledge generally available to a person skilled in the art, to modify Tawney, (2) there must be a reasonable expectation of success, and (3) Tawney must teach or suggest all of the claim limitations.

¹ Support for this feature can be found notably at page 7 of the Applicant's disclosure, lines 12 to 17.

² Support for this feature can be found notably at page 6 of the Applicant's disclosure, lines 1 to 7.

³ *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

⁴ *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981) (quoting *Hansgird v. Kemmer*, 102 F.2d 212, 214, 40 USPQ 665, 667 (CCPA 1939)).

In paragraph 3 of the Office Action, the Examiner indicates that Tawney discloses “an outer shell (sidewalls 18, base 20 and foam bootie 24, see column 3, lines 60-63) for receiving the heel, the ankle and the medial and lateral sides of the foot, said outer shell comprising a layer of thermoformed foam, said layer of thermoformed foam comprising first and second opposite surfaces, one of said first and second opposite surface being heat-treated.”

It is submitted that the construction and structure of the Applicant's upper is different from the upper disclosed in Tawney and the invention defined in claim 42 is clearly patentable over Tawney.

The Applicant has made a significant advance in the art of footwear construction by recognizing that the rigidity of a layer of thermoformable foam can be increased by exposing one of its opposite surfaces to temperatures between 200°F and 300°F in order to form a skin on the exposed surface. In other words, for the same thermoformable foam, a layer with a skin has a greater rigidity from a layer without such a skin (see Applicant's disclosure at page 7, lines 4 to 8).

By incorporating this layer of thermoformable foam with a skin in a multi-layer composite sheet having a further layer of fibers, by thermoforming this multi-layer composite sheet in order to realize a thermoformed outer shell defining a foot-receiving cavity having a three-dimensional geometry that conforms to the foot, and by incorporating this thermoformed outer shell in a footwear, such footwear has a greater rigidity and is lighter than a footwear which does not comprise a layer of thermoformed foam with a skin.

Tawney shows a process where the applied heat is generally between 250°F and 350°F. However, a person skilled in the art would have understood that these temperatures are temperatures applied to the mold, not temperatures directly applied to the surface of the foam core 22 or bootie 24.

Moreover, Tawney is totally silent concerning the possibility of exposing one of the surfaces of the foam core 22 or bootie 24 to such temperatures in order to form a skin on this surface. Tawney does not therefore disclose nor suggest that one surface of the layer of thermoformable foam has a skin formed by exposing it to temperatures between 200°F and 300°F, as recited in claim 42.

Claim 42 further specifies that the outer shell is made of a thermoformed multi-layer composite sheet having a first layer of thermoformable foam and a second layer of fibers. In paragraph 6 of the Office Action, the Examiner indicates that “Tawney discloses a second layer, foam overlay (34) [and] it has been held to be within the general skill of a worker in the art to select a know material on the basis of its suitability for the intended use as a matter of obvious design choice.”

However, Tawney is totally silent regarding the use of a layer of fibers and there is no suggestion in Tawney to use another material than foam for the foam core 20 or bootie 24. Tawney does not therefore disclose nor suggest an outer shell made of a thermoformed multi-layer composite sheet having a first layer of thermoformable foam and a second layer of fibers, as recited in claim 42.

In view of the above, the Applicant submits that independent claim 42 is clearly patentable over Tawney and allowance of this claim is earnestly solicited. Because claims 43 to 50 depend directly or indirectly from claim 42 and include by reference all of the features recited in this claim, claims 43 to 50 are also patentable.

Furthermore, with respect to claim 43 that specifies that each of the first and second opposite surfaces of the layer of thermoformable foam has a skin formed by exposing each surface to temperatures between 200°F and 300°F, the Examiner will appreciate that Tawney does not disclose nor suggest a layer of thermoformable foam having both opposite surfaces with respective skins. Claim 43 is therefore patentable over Tawney.

Moreover, with respect to claim 44 that specifies that the outer shell further comprises an inner lining mounted in the outer shell, the inner lining being less rigid than the outer shell and having an inner surface adapted to contact the foot in use and an outer surface affixed to the outer shell, the Examiner will appreciate that Tawney does not disclose nor suggest such inner lining.

Indeed, as opposed to the bootie 24 of Tawney that is mold with the foam core 22, the inner lining of the Applicant's upper is not mold (thermoformed) with the outer shell, but is rather a separate component mounted in the outer shell after the thermoforming process of the outer shell:

“The first step in assembling the skate boot 90 is to glue or sew the inner lining 92 to the outer shell 10. It is the outer shell 10 which forms the main structural component of the skate boot 90 and the inner lining 92 is less rigid than the outer shell 10. The inner lining 92 comprises a layer of soft material such as a sheet of polyester laminated with a layer of foam, or a layer of fabric made from 100% nylon fibers. The inner lining 92 comprises an inner surface that is adapted to contact the skin of the foot F in use and an outer surface affixed to the inner surface of the outer shell 10.” [at page 10 of the Applicant's specification, lines 17 to 23]

Claim 44 is therefore patentable over Tawney.

Furthermore, with respect to claim 46 that specifies that the outer surface of the outer shell is made of a further layer of a film of polyurethane, the Examiner will appreciate that Tawney does not disclose nor suggest a further layer of a film of polyurethane that is part of the outer surface of the outer shell. Claim 46 is therefore patentable over Tawney.

Patentability of claims 51 to 67

The Applicant brings the Examiner's attention to the following highlighted features of new independent claim 51 that are neither disclosed nor suggested by Tawney:

51. A lasted skate boot for enclosing a human foot, the foot having a heel, an ankle, medial and lateral sides, a plantar surface and toes, said skate boot comprising an outer shell made of a multi-layer composite sheet that is thermoformed for defining a foot-receiving cavity having a three-dimensional geometry that conforms to the foot, wherein said multi-layer composite sheet has a first layer of thermoformable foam having a core and first and second opposite surfaces **and a second layer of fibers, and wherein one of said first and second opposite surfaces of said first layer of thermoformable foam has a skin formed by exposing said one of said first and second opposite surfaces to temperatures between 200°F and 300°F.**

For the same reasons as those set forth with respect to claim 42, it is submitted that independent claim 51 is patentable over Tawney and allowance of this claim is respectfully solicited. Because claims 52 to 67 depend from independent claim 51 and include all the features of this claim, claims 52 to 67 are also allowable. Furthermore, for the same reasons as those set forth with respect to claims 43, 44 and 46, it is submitted that claims 52, 53 and 64 are patentable over Tawney.

Moreover, with respect to claim 54, the Examiner will appreciate that Tawney does not disclose nor suggest an outer shell thermoformed such that its heel counter is substantially cup-shaped for following the contour of the heel, the upper part of its ankle portion is shaped for following the upper part of the Achilles tendon and the lower part of its ankle portion is shaped for following the lower part of the Achilles tendon, as recited in claim 54.

Tawney is completely silent with respect to the shape of the rear portion of the upper. Nowhere in Tawney do the inventors refer to the Achilles tendon of the foot. *A fortiori*, nowhere in Tawney do the inventors indicate or suggest that the skate boot may comprise an outer shell that is thermoformed such that its ankle portion comprises upper and lower parts that follow the rear profile of the Achilles tendon. Claim 54 is therefore patentable over Tawney.

With respect to claim 55, which depends from claim 54, the Examiner will appreciate that Tawney does not disclose nor suggest an outer shell thermoformed such that its ankle portion comprises a lateral cup-shaped section for receiving the lateral malleolus and a medial cup-shaped section for receiving the medial malleolus. Claim 55 is therefore patentable over Tawney.

Patentability of claims 68 to 76

The Applicant brings the Examiner's attention to the following highlighted features of new independent claim 68 that are neither disclosed nor suggested by Tawney:

68. A method of making a lasted skate boot for enclosing a human foot, said method comprising:
- (a) providing a layer of thermoformable foam having a core and first and second opposite surfaces;
 - (b) **exposing one of said first and second opposite surfaces of said layer of thermoformable foam to temperatures between 200°F and 300°F in order to form a skin;**
 - (c) providing a multi-layer composite sheet having **a layer of fibers** and said layer of thermoformable foam with said skin; and
 - (d) thermoforming said multi-layer composite sheet for constructing an outer shell having a foot-receiving cavity with a three-dimensional geometry that conforms to the foot.

For the same reasons as those set forth with respect to claim 42, it is submitted that independent claim 68 is patentable over Tawney and allowance of this claim is respectfully solicited. Because claims 69 to 76 depend from independent claim 68 and include all the features of this claim, claims 69 to 76 are also allowable.

Moreover, with respect to claim 70, the Examiner will appreciate that Tawney does not disclose nor suggest a method where pressure pads are positioned over the multi-layer composite sheet for applying pressure to the sheet. Claim 70 is therefore patentable over Tawney.

Furthermore, with respect to claim 71, the Examiner will appreciate that Tawney does not disclose nor suggest a method further comprising affixing an inner lining to an inner surface of said outer shell, said inner liner being less rigid than said outer shell and comprising an inner surface being adapted to contact the foot in use.

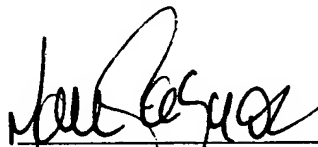
Indeed, as indicated previously, as opposed to the bootie 24 of Tawney that is mold with the foam core 22, the inner lining of the Applicant's upper is not mold (thermoformed) with the outer shell, but is rather a separate component mounted in the outer shell after the thermoforming process of the outer shell. Claim 71 is therefore patentable over Tawney.

CONCLUSION

It is respectfully submitted that all rejections and objections raised by the Examiner have been addressed and overcome by the present response and each of pending claims 42 to 76 is in condition for allowance. Allowance of these claims and issuance of the Notice of Allowance are respectfully solicited.

If the claims of the application are not believed to be in full condition for allowance, for any reasons, the Applicant respectfully requests the constructive assistance and suggestions of the Examiner in drafting one or more acceptable claims pursuant to MPEP § 707.07(j) or in making constructive suggestions pursuant to MPEP § 706.03 so that the application can be placed in allowable condition as soon as possible and without the need for further proceedings. The Examiner is invited to contact the Applicant's undersigned agent to expedite the examination of the application if issues remain outstanding.

Respectfully submitted,



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